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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,420	01/27/2000	Katsunori Kumasaka	0694-127	9104

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Hopgood Calimafde
60 East 42nd Street
New York, NY 10165

EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 02/20/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

701 420

Applicant(s)

Kumasaka et al

Examiner

M. B. J.

Group Art Unit

2334

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 10-1-02
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-17 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-17 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Art Unit: 2834

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-9 and 12-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no written description or illustration of a transformer in which the electrodes on the side surfaces (e.g. applicants #21, 23, #27, #29 etc) extend along approximately one-half of the longitudinal length of the transformer. As shown in applicants figs. 1, 3A, 4 and 5 the side electrodes do not extend anywhere near one-half of the transformer length. Note that claims 16 contradicts parent claim in that one cannot have an electrode extending one-half the transformer length and at the same time have multiple pairs of electrodes occupying the same area.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4, and 7-9 are rejected under 35 U.S.C. 102(a) as being anticipated by Japan

(033).

Art Unit: 2834

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanayama, Yamamoto or Sato in view of Japan (033), Japan (327) or Prior art (applicants fig. 1). Kanayama (fig. 23), Sato (Figs. 2, 3 & 14) and Yamada (figs. 4 & 5) teach the piezoelectric transformer with multiple pairs of second (output) electrodes. They do not teach the side leads for the drive section or mounting on a PCB with power supply circuitry. However each of Japan (033), Japan (237) and the Prior Art (applicants figs) teach that side leads are conventionally used-especially for laminated structures.

Japan (033) also teaches mounting a transformer on a PCB with associated input/output circuitry. Thus to use side leads for their conventional advantages and to provide integration of circuit element for Sato, Kanayama or Yamamoto would have been obvious to one of ordinary skill in the art.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inou, Sakarui or Shimizu..

The references teach supporting a piezoelectric transformer in an elastic manner. They do not teach the specific mounting location. However, optimization of a known device (e.g. thru

Serial Number: 09/701,420

Art Unit: 2834

routine experimentation) has long been held to be within the skill expected of the routineer. Thus selection of specific mounting locations would have been obvious to one of ordinary skill in the art.

Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Japan (033) as applied to claim 5 above, and further in view of Inoi.

The combination of Yamamoto and Japan (033) has been previously discussed. Neither patent teaches using an elastomeric mount for a piezoelectric transformer. However, such a mount is well known in conjunction with piezoelectric transformers as taught by Inoi. A flexible mount protects the ceramic from harm and isolates it from vibrations in a well known manner. Therefore to use an elastic mount for Japan (033) or Yamamoto for its known benefits would have been obvious to one of ordinary skill in the art. The use of flat, flex cable connectors (known per se) is considered within the skill expected of the routineer. Such choice amounts to selection from among known connectors and would have been obvious to one of ordinary skill in the art.

Regarding applicants arguments it is noted that Japan (033) figs. 3, 4 and 8 clearly teaches electrodes on both side surfaces of the transformer. As for as claims 10 and 11 go, it has long been held that optimization of a known device e.g. thru routine experimentation is within the skill expected of the routineer. Selection of mounting areas, usually nodal locations can easily be optimized for a particular application via e.g. trial and error.

Art Unit: 2834

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Budd/ds

02/16/02

WILLIAM J. BUDD
PRIMARY EXAMINER
ART UNIT 217